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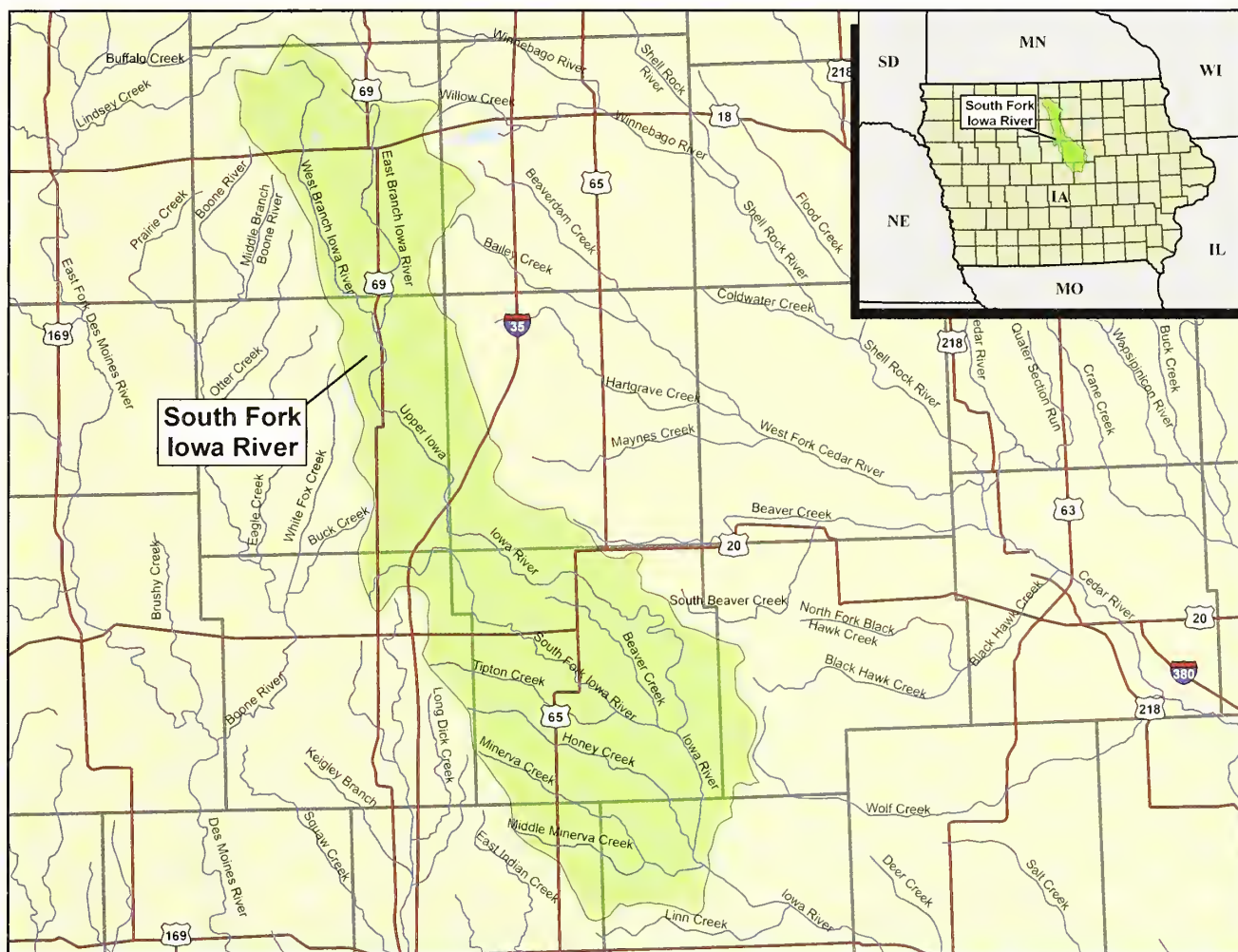
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Conservation Effects Assessment Project (CEAP)

Watershed Fact Sheet

South Fork Watershed, Iowa: 2004-2006

An ARS* Benchmark Research Watershed, one of 24 CEAP watershed projects.



CEAP Assessment

Study loads of sediment, nitrate, phosphorus, and *E. coli* leaving the watershed and the capacity of conservation practices to reduce those amounts. Identify locations where conservation practices should be most effective in reducing contaminant loads. Assess the impact of current tillage and cropping practices on soil quality.

Watershed Description

- 183,000 acres
- 85% crop land, 6% grass and pasture
- Approximately 100 confined swine-feeding operations.

- Watershed representative of tile-drained lands in the Midwest Corn Belt that are under intensive management for corn and soybean and livestock production.

Issues: Major water quality concerns are nitrate loads from subsurface drainage systems, phosphorus, and sediment in runoff, and pathogens in stream flow. Soil quality concerns to be assessed are trends in carbon sequestration as practices are implemented, and phosphorus accumulation in soils receiving frequent manure applications.

*Agricultural Research Service



Restored wetlands.



Ditch with tiles.

Approach

Water Sampling and Monitoring: Nutrients, sediment, and pathogens

Watershed Models: EPIC (Erosion Productivity-Impact Calculator), SWAT (Soil and Water Assessment Tool)

Assess Practices: Conservation tillage, nutrient management, waste utilization, constructed wetlands, grass waterway, and subsurface drainage.

Communicating Results

Mapping strategies to identify optimal locations to install conservation practices as an alternative to current placement strategies; an assessment of soil quality in the watershed; documentation of land use and water quality dynamics in the watershed.

Collaborators

- USDA Natural Resources Conservation Service
- U.S. Geological Survey
- U.S. Environmental Protection Agency
- South Fork Watershed Alliance
- Iowa Geological Survey
- Iowa State University

Contacts

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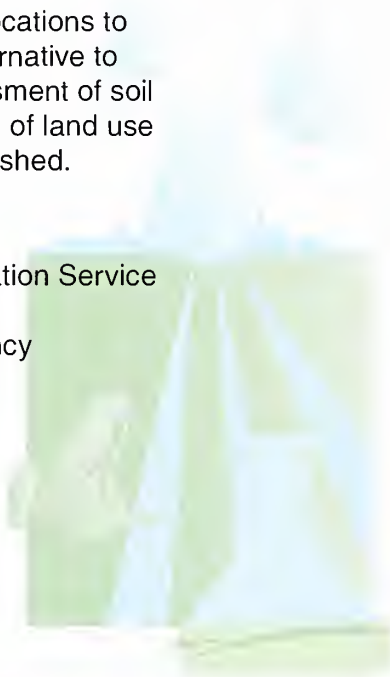
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